



FedEx Express is committed to working with CARB to develop a common-sense on-road, in-use diesel truck replacement regulation that cleans the air, and supports our sustainability goals. While the current economic slowdown will make meeting these goals especially challenging, it has also caused significant reductions in diesel use and corresponding emissions. We believe that CARB should take advantage of this period of reduced emissions to reconsider key aspects of this rule.

The Governor has called for a balance between the environmental and economic needs and goals. We at FedEx share this view. FedEx is committed to sustainably connecting the world, and enhancing the long-term share value of the company for our shareholders, and for the communities and businesses that rely on our services. FedEx understands that a sustainable business is intrinsically tied to a sustainable society. To this end, we use innovations and technologies to minimize environmental impacts from our operations and products. For more information go to:

[http://about.van.fedex.com/corporate\\_responsibility/the\\_environment](http://about.van.fedex.com/corporate_responsibility/the_environment)

## **KEY CONCERNS**

Specifically, our key concerns and issues are as follows:

- **Practical application may result in unintended stringency and cost impacts that significantly exceed those estimated by CARB staff.**

It is our strong belief that adequate time is needed to develop a compliance strategy that does 2 important things: achieves environmental improvement objectives swiftly and does not lead to excessive compliance costs. It seems to us that CARB staff may be too aggressive in their compliance time-frame requirements. To put the cost of this rule in perspective, in a three-year period, FedEx will purchase more diesel vehicles for California compliance than we purchased for our entire U.S fleet over the last four years. Without added flexibility, FedEx's annual compliance cost will exceed our U.S. budget for vehicles, leaving the rest of the country without resources and potentially eliminating our ability to invest in other environmentally innovative projects, like our solar energy project in Oakland, CA. This is an untenable position for our company.

- **The ability to employ retrofit technology to reduce compliance cost is very limited.**

In our view, both economic and technological feasibility considerations weigh in favor of vehicle replacements rather than retrofits.

- Cost of PM BACT is more than 20% of new vehicle cost.
- Cost of NOx BACT is more than 50% of new vehicle cost.
- FedEx experience is that PM BACT technology fails in 1-2 years, because frequent stops prevent exhaust from reaching temperatures required for success.
- Our OEM manufacturer has stated that not even our 2007-2009 vehicles can be retrofitted to meet the 2010 NOx standard.

- NOx BACT requires replacement with 2010 certified truck. In light of this, FedEx has concluded it is an inefficient use of resources to invest in PM BACT for a truck that will be replaced in 1-3 years.
- PM BACT is not a simple matter of attaching a filter, and retrofitting a technology is always more difficult. To put this in perspective, our OEM conducted a recall campaign to repair an engineering design flaw in the emission system of our 2007 certified vehicles, despite years of lead time for the design process. Expecting fleet operators to achieve success in the timeframes contained in the rule, in a retrofit environment, with an array of different vehicles is overly optimistic.

- **Rule does not address fleet downsizing.**

Fleet reductions and replacement with non-diesel trucks will result in PM and NOx reductions that should be considered in compliance calculations. Reduction in fleet size is of particular concern in this economic environment, which has seen the FedEx fleet decrease by almost 5% over the last year. Consider that replacing a truck will result in greater emissions than eliminating a truck entirely. Similarly, replacement of a diesel truck with a gasoline truck would eliminate diesel PM emissions entirely. Also, the use of catalytic NOx controls for gas engines is fully mature and achieves reliable reductions.

- **Conflicts with FedEx Sustainability Goals.**

Replacement trucks will generally be less fuel efficient than the vehicles they replace, increasing our greenhouse gas footprint in California. Furthermore, this rule will redirect capital resources away from a strategy that has resulted in a 20% improvement in the fuel efficiency of our fleet. Finally, replacing trucks prior to the end of their useful life gives rise to avoidable environmental impacts that are associated with the manufacture of new vehicles.

- **Hybrid credits should not expire.**

The introduction of hybrids reduces greenhouse gas emissions as well as PM and NOx and should be encouraged as strongly as possible. FedEx is strongly committed to hybrid technology, and operates the largest hybrid fleet in the transportation industry. In 2004, we introduced the first hybrid trucks into revenue service in Sacramento. Our hybrid fleet has now accumulated over 3 million miles. Unfortunately, the continued high incremental cost continues to present a market barrier for hybrids. Phasing out the hybrid credit will have a dampening effect on investment in hybrids.

- **High cost of NOx reductions from 2018-2022**

When considered alone, these NOx reductions come at an unacceptably high incremental cost and CARB should consider their elimination. As an example, for the cost of replacing a 2003 (or older) truck with a 2007-2009 truck, emissions are reduced by 10.2 grams per mile. In comparison, replacing a 2007-2009 truck with a 2012 truck will achieve a reduction of only 3.2 grams per mile, at the same or higher cost. At this point, more cost-effective reductions NOx could be achieved.

For instance, this money could be spent on increasing the number of hybrids in our gasoline-powered truck fleet, a current FedEx project that achieves significant CO2 reductions in addition to reducing criteria pollutants. Eliminating these requirements would also address the issue of the phase-out of hybrid credits.

- **Cumulative Effect of Multiple Regulations**

Like others subject to several CARB diesel rules we are very concerned about the Cumulative Effect of Multiple Regulations on our company. All of these rules are designed to accelerate fleet turnover, requiring capital investment to replace equipment prior to the end of its normal and expected useful life.

FedEx will be subject to fleet rules for:

- Portable Engines
- Large Spark-Ignited Offroad Engines
- Offroad Diesel Equipment
- Onroad Truck and Bus Rule

We would ask that CARB develop a mechanism that would alleviate the adverse impact on businesses subject to two or more ARB rules—in the diesel arena--- based on the cumulative financial impacts of all rules.